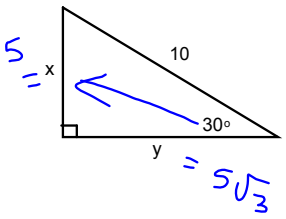
$$\tan A = \frac{opp}{adj}$$

7.6/7.7 (Continued)

The Sine and Cosine Ratios



$\sin 30 = \frac{1}{2}$

$\sin A = \frac{opp}{hyp}$ $\frac{5}{10}$

$5 = x$

$y = 5\sqrt{3}$

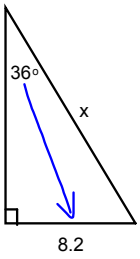
$\cos A = \frac{adj}{hyp}$

$$\sin = \frac{opposite}{hypotenuse}$$

$$\cos = \frac{adjacent}{hypotenuse}$$

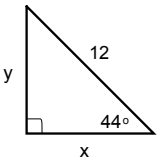
$$\tan = \frac{opposite}{adjacent}$$

SOHCAHTOA



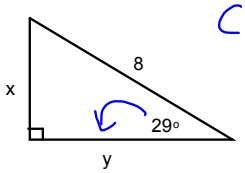
$\sin 36 = \frac{8.2}{x}$

$x \approx 14.0$



$x \approx 8.6$

$y \approx 8.3$



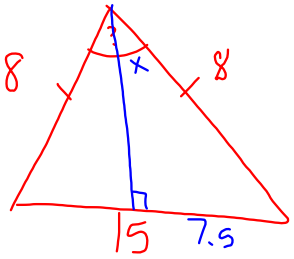
$\cos 29 = \frac{y}{8}$

$y \approx 7.0$

$\sin 29 = \frac{x}{8}$

$x \approx 3.9$

Find the vertex angle of an isosceles triangle with legs of length 8, and a base of length 15.



$\sin x = \frac{7.5}{8}$

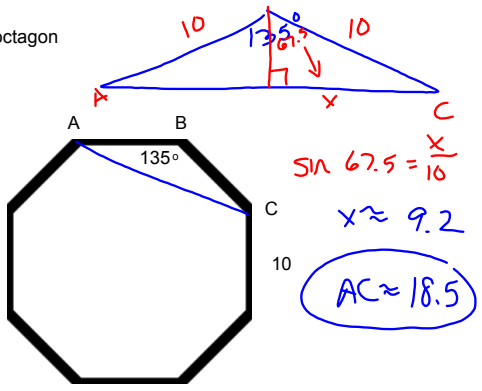
$\sin^{-1}\left(\frac{7.5}{8}\right) = x$

$x \approx 69.6°$

$\times 2$

$139.3°$

Regular octagon
Find AC.

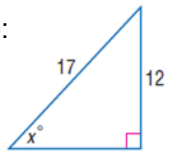


$\sin 67.5 = \frac{x}{10}$

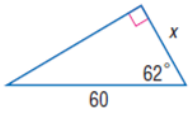
$x \approx 9.2$

$AC \approx 18.5$

Do:

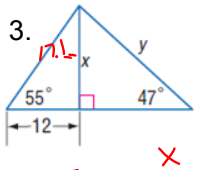
1. 

$x \approx 44.9°$

2. 

$x \approx 28.2$

Do together:

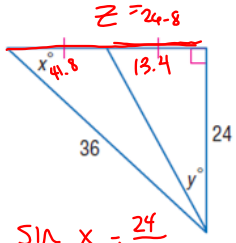
3. 

$\tan 55 = \frac{x}{12}$

$x \approx 17.1$

$\sin 47 = \frac{17.1}{y}$

$y \approx 23.4$

4. 

$\sin x = \frac{24}{36}$

$x \approx 41.8°$

$36^2 - 24^2 = z^2$

$\tan y = \frac{13.4}{24}$

$y \approx 29.2°$

HW
p477-479
10-15, 30, 36a
p486
6-8, 14,15